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MASSACHUSETTS INTERNATIONAL TRADE COUNCIL, INC. (MITC)

The Massachusetts International Trade Council was established in January, 1984 to address the exporting needs of Massachusetts firms. The Council is a quasi-public agency that assists Massachusetts companies at no charge to the company.

The primary objective of the Council is to work with small and medium sized Massachusetts companies to assist them in entering an export market for the first time or to help them increase their export sales. Towards this end, the Council provides one-on-one corporate counseling, has led numerous overseas trade missions, has attended international trade shows accompanied by Massachusetts companies and actively develops international contacts and trade leads. The Council also has available an export database which provides contacts in overseas markets to assist Massachusetts companies in their export promotion. If you would like your company to be entered into our database, please complete the questionnaire at the back of the directory.

The Council has published the *Massachusetts International Biomed Directory* as part of our mission to promote the Massachusetts biomedical industry internationally. The Council would be the first contact for international companies to make who are interested in identifying Massachusetts companies within the biomedical industry who are seeking international distribution, licensing agreements or strategic partners.

For further information, please contact:

Massachusetts International Trade Council, Inc. 100 Cambridge Street, Suite 902 Boston, MA 02202 USA

Tel: (617) 367-1830 Fax: (617) 227-3488 Telex: 5101012536

The Massachusetts International Biomed Directory is the result of careful preparation and industry research. However, due to the scope of the Directory, the Massachusetts International Trade Council, Inc. cannot assume liability for the correctness of the listings or for the information on which the listings are based. The Council does not assume and therefore disclaims any liability to any party for any loss or damage caused by errors or omissions in this directory, whether such errors result from negligence, accident or any other cause.

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AN OVERVIEW OF THE MASSACHUSETTS BIOMEDICAL INDUSTRY

Massachusetts is one of the principal economic, educational, technological, and financial centers of the United States, enjoying a unique set of assets rarely available in the same combination in other regions of the country. It is a world center for basic and applied research, new product development, and entrepreneurship. With one of the highest concentrations of colleges and universities and hospitals in the nation, Massachusetts has become a world center for the development of new technologies including biotechnology, new materials and software. Massachusetts is also the home of a highly skilled and educated labor force, which is well adapted to technological change and innovation.

These attributes have created an environment where innovative companies are continually being spun-off from existing firms and local universities, and which acts as a magnet for firms from outside of the state considering a new American location. Supporting these attributes is a strong and dynamic financial community together with a state government that is committed to business growth. There exists as well a strong physical and service infrastructure that is necessary for businesses to operate profitably.

Biotechnology in Massachusetts is a dynamic and sophisticated industry. Many of the factors that have contributed to Massachusetts' pre-eminence in high technology have also thrust the state into the vanguard of the biotechnology industry. Over the last decade, Massachusetts has emerged as a major center in the United States for biotechnology research/development and production. A number of factors have contributed to this development, including the historical receptivity of the New England area to risk-taking and innovation. Perhaps, however, the more important factor is Massachusetts' educational excellence. The great concentration of world class educational, research, and medical facilities located in Massachusetts provides both a magnet to and a rich source of talented scientists, technicians, and other professionals.

The prospects for the continued growth of the Massachusetts biotechnology industry are very good. In fact, a recent report by the Massachusetts Biotechnology Council estimates that as many as 150 biotechnology companies with revenues of \$3 billion and 75,000 employees will exist in Massachusetts by the year 2000.

Companies that decide to locate in Massachusetts are joining a unique industrial community. Although the field is a competitive one, the state's biotechnology community members work cooperatively with each other. As a result, Massachusetts has one of the oldest and most active biotechnology industry associations in the United States, the Massachusetts Biotechnology Council (MBC). The MBC provides a network that serves common interests. It represents biotechnology concerns at the state level, endorsing supportive legislation and actively participating in the regulatory process. The Council works closely with local governments to produce responsible regulations that allow companies to operate competitively while providing adequate safeguards to communities.

The importance of biotechnology to the state's economic future is recognized at all levels of state and local government. A number of state agencies and organizations include on their program agendas support strategies for the development of biotechnology-related activities. Since it was established in 1985, the Massachusetts Centers of Excellence Corporation, a quasi-public agency, has awarded a dozen biotechnology grants to companies and academic institutions for technology transfer projects valued at over \$2 million.

The Massachusetts Biotechnology Research Institute (MBRI) is a consortium of seven Worcester-area universities and research institutions actively involved in stimulating technology transfer activities in the state through capital assistance and incubator facilities. MBRI is located at the 100 acre Massachusetts Biotechnology Research Park in Worcester, established adjacent to the University of Massachusetts Medical Center.

EDUCATIONAL INFRASTRUCTURE

Massachusetts' reputation as a leading center for learning in the United States is upheld by the continuing stream of new ideas that originate from such outstanding public and private universities, as Harvard, Massachusetts Institute of Technology the University of Massachusetts, Tufts and Boston University. With its 129 public and private colleges and universities, Massachusetts has the highest concentration of institutions of higher learning of any state in the nation. These institutions attract over 400,000 students per year, a great proportion of whom choose to remain in the state after completing their studies.

According to the most recent Gorman Report, which ranks the top twenty universities in the United States in each of the major academic disciplines, Massachusetts graduate programs are rated first in the nation in almost all biomedical and engineering related fields. M.I.T. is first in microbiology, cellular/molecular biology, and biochemistry, while Harvard is first in chemistry. M.I.T. and Harvard rank third and fourth in bioengineering/biomedical engineering respectively.

The number of university programs in life sciences is increasing as is the matriculation in existing programs. Table 1 lists the masters and doctoral programs in the biomedical fields in Massachusetts.

Although there is not a central source that collects and maintains information on the annual number of Massachusetts students enrolling and graduating in biomedical disciplines, a phone survey of the major universities in the state was conducted. Table 2 lists those results.

In addition to the those graduate and Ph.D programs listed in Table 2, Massachusetts has four medical schools: Boston University (BU), Harvard University, Tufts University, and the University of Massachusetts Medical School as well as one veterinary school, Tufts University School of Veterinary Medicine. Enrollment for these programs is outlined in Table 3.

MASTERS AND DOCTORAL PROGRAMS IN THE BIOMEDICAL FIELD IN MASSACHUSETTS

UNIVERSITY	PROGRAM
Boston College (Boston)	biochemistry, biology and biomedical sciences
Boston University (Boston)	cell biology, neurobiology, biochemistry, biophysics, chemistry microbiology, pharmacology and experimental therapeutics, biomedical engineering
Brandeis University (Waltham)	biology, cell biology development, genetics, microbiology, biochemistry
Clark University (Worcester)	biochemistry, biochemical and developmental genetics, microbiology, biochemistry
Harvard University (Cambridge)	cellular and development biology, cancer biology, molecular genetics, cell biology, biology, bioelectricity and biomechanics, biochemistry, nutritional biochemistry, biomedical chemistry, chemistry, biophysics, immunology, virology, pharmacology, toxicology, biomedical engineering, medical engineering, medical physics
M.I.T. (Cambridge)	biochemistry, biological chemistry, cellular and development biology, neurobiology, immunology, microbiology, biochemical engineering, medical engineering, medical physics

UNIVERSITY

PROGRAM

Northeastern University (Boston)

biology, biomedical sciences, pharmaceuticals, pharmacology, toxicology, medical chemistry, medical

laboratory science

Tufts University (Medford)

cellular biology, developmental biology, reproductive biology, biochemistry, pharmacology,

immunology, microbiology, biomedical

engineering

University of Massachusetts (Amherst/Boston/

Worcester)

molecular and cellular biology, biotechnology, biomedical science, microbiology, neurobiology,

immunology, biochemistry, molecular

genetics, pharmacology

Worcester Polytechnic Institute (Worcester) biology, biomedical and clinical

engineering

Source: Massachusetts Office of International Trade, 1988.

STUDENTS ENROLLED IN BIOMEDICAL PROGRAMS IN MASSACHUSETTS

UNIVERSITY

Boston University (Boston)

PROGRAM

Biochemistry (1986)

- 8 Ph.D
- 10 M.S.
- 80 matriculated students

Chemistry (1986)

- -9 Ph.D
- -3 M.S.

Microbiology

- -3 Ph.D
- -1 M.S.
- -33 matriculated students

Biology

- -20 Ph.D
- -8 M.S.
- -111 matriculated students

Biomedical Engineering

- -20 Ph.D candidates
- -65 matriculated students

Pharmacology and Experimental

Therapeutics

- -1 Ph.D
- -9 matriculated students

UNIVERSITY

TABLE 2 (CONTINUED)

PROGRAM

Boston University Medical School (1986) (Continued) -17 Ph.D/M.D. -21 M.S./M.D.

University of Biology Department (1988)
Massachusetts -50 B.S.
(Boston) -4 M.S.

Biotechnology and Biomedical Science (1988)
-4 M.S.
-13 matriculated students

Harvard Biology (1986)
University -7 Ph.D
(Cambridge) -11 M.S.

-68 matriculated students

Cellular and Developmental Biology (1986) -11 Ph.D -5 M.S. -62 matriculated students

Division of Medical Sciences (M.D./Ph.D) (1986)

-23 Ph.D

-238 matriculated students

Biochemistry and Molecular Biology (1986)

-7 Ph.D

-62 matriculated students

UNIVERSITY

PROGRAM

Harvard University (Continued)

Genetics (1988)

-4 Ph.D

-58 matriculated students

Biological Chemistry and Molecular

Pharmacology (1988)

-8 Ph.D

-56 matriculated students

Biophysics (1986)

-3 Ph.D

-36 matriculated students

Microbiology and Molecular Genetics (1988)

-2 Ph.D

-43 matriculated students

Pharmacology (1986)

-3 Ph.D

-17 matriculated students

Immunology (1988)

- 4 Ph.D

- 39 matriculated students

Brandeis University (Waltham) Biology* (1988)

-7 Ph.D

-1 M.S.

*(includes cell biology, genetics, microbiology and developmental

biology)

<u>UNIVERSITY</u> <u>PROGRAM</u>

Brandeis Chemistry (1988)

University -10 Ph.D (Continued) -7 M.S.

Biochemistry (1988)

-6 Ph.D -1 M.S.

Tufts Biology* (1986)

University -3 Ph.D (Medford) -5 M.S. -80 B.S.

-21 matriculated students

* (includes cellular, developmental, and

reproductive biology)

Pharmacology (1987)

- 16 Ph.D - 1 M.S.

Clark Biology (1986) University -3 Ph.D

(Worcester) -3 Ph.D -4 M.S.

-20 matriculated students

Biochemistry (1988)

-1 Ph.D

Chemistry (1988)

-2 Ph.D -2 M.S.

<u>UNIVERSITY</u> <u>PROGRAM</u>

M.I.T. Applied Biological Sciences (1986)

(Cambridge) -20 Ph.D -10 M.S.

-103 matriculated students

Chemistry (1986-1988)

-116 Ph.D -11 M.S.

-225 matriculated students

Medical Engineering/Physics (1986)

-4 Ph.D

-42 matriculated students

Worcester Biology and Biotechnology (1986-1988)

Polytechnic -3 Ph.D Institute -5 M.S.

(Worcester) -23 matriculated students

Biomedical and Clinical Engineering

(1986-1988) -3 Ph.D -20 M.S.

-18 matriculated students

Northeastern Biology (1988)

University -2 Ph.D (Boston) -12 M.S.

-65 matriculated students

UNIVERSITY	PROGRAM

Northeastern Pharmacology (1988)
University -4 Ph.D

(Continued) -3 M.S.

-30 matriculated students

Biomedical Science* (1988)

-3 Ph.D -11 M.S.

*(includes pharmaceutics, medical

science, medical technology, toxicology)

University of Molecular and Cellular Biology (1986)
Massachusetts -1 M.S.

(Amherst) -37 matriculated students

Biochemistry (1986)

-4 Ph.D -1 M.S.

-7 matriculated students

Source: Massachusetts Office of International Trade, 1988

TABLE 3

MEDICAL SCHOOLS IN MASSACHUSETTS

UNIVERSITY	NUMBER OF GRADUATES PER YEAR	TOTAL ENROLLMENT
Harvard University	165	665
Tufts University (Medical)	150	600
Boston University	150	620
University of Massachusetts	100	420
Tufts University (Veterinary)	61	264

Source: Massachusetts Office of International Trade, 1988

TEACHING INSTITUTIONS AND HOSPITALS

Massachusetts' four medical schools and their 22 major affiliated teaching hospitals are world-renown for their excellence in patient care. Clients from around the world make pilgrimages to Massachusetts to secure medical consultation and intervention. Likewise, students from around the world seek basic professional training in Massachusetts' medical schools and advanced clinical experience as residents in the teaching hospitals. A listing of affiliated teaching hospitals in Massachusetts appears in Table Four.

Besides providing patient care and medical education, faculty at academic medical centers engage in biomedical research. Because the research almost always involves human subjects or was promoted by patient care problems, it is applied rather than theoretical in nature and hence likely to have the potential for commercialization.

Due to the commercial significance of both patient-oriented biomedical research and late-stage clinical undertaken in academic medical centers, extensive ties have developed between researchers at these centers and biotechnological, pharmaceutical, medical device and instrumentation corporations. An example of the level of these ties is the 1980 commitment by Hoechst to fund a \$50 million genetics department at Massachusetts General Hospital. In addition, New England Medical Center with 30-40 percent of its faculty engaged in consulting or working with companies is typical of many of the state's academic medical centers.

The process by which businesses formally and informally consult with researchers at academical medical centers also serves as a major conduit for technology transfer in the medical field. Given the unique density of first-rate medical activities in Massachusetts' academic medical centers, it is not surprising that the connections between the business sector and medical researchers is strong and growing.

Teaching hospitals in Massachusetts with research funding over \$1 million include:

- -Boston University Hospital (Boston)
- -Brigham and Women's Hospital (Boston)
- -Beth Israel Hospital (Boston)
- -Children's Hospital (Boston)
- -Dana Farber Cancer Institute (Boston)
- -Massachusetts Eye and Ear Infirmary (Boston)
- -Massachusetts General Hospital (Boston)
- -McLean Hospital (Belmont)
- -New England Deaconess Hospital (Boston)
- -New England Medical Center (Boston)
- -St. Elizabeth's Hospital (Boston)
- -University of Massachusetts Hospital (Worcester)

MEDICAL SCHOOLS & THEIR MAJOR AFFILIATED TEACHING HOSPITALS

BOSTON UNIVERSITY MEDICAL SCHOOL University Hospital Carney Hospital Veterans Administration Medical Center, Boston Boston City Hospital

HARVARD UNIVERSITY MEDICAL SCHOOL
Brigham and Women's Hospital
Beth Israel Hospital
Children's Hospital Medical Center
Dana-Farber Cancer Institute
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital
McLean Hospital
Mount Auburn Hospital
New England Deaconess Hospital

TUFTS UNIVERSITY MEDICAL SCHOOL New England Medical Center Baystate Medical Center Faulkner Hospital St. Margaret's Hospital for Women St. Elizabeth's Hospital

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL University of Massachusetts Hospital Berkshire Medical Center Worcester Memorial Hospital St. Vincent Hospital

Source: COTH Directory 1987, Council of Teaching Hospitals, Association of American Medical Colleges

NIH RESEARCH AND DEVELOPMENT AWARDS TO TOP TEN STATES FISCAL YEAR 1986 (in thousands of dollars)

STATE	TOTAL	% OF TOTAL
1. California	649,508	17
2. New York	562,625	15
3. MASSACHUSETTS	473,137	13
4. Maryland	275,696	7
5. Pennsylvania	249,892	7
6. Texas	214,556	6
7. Illinois	152,870	4
8. North Carolina	152,625	4
9. Washington	133,089	4
10. Connecticut	121,763	3
USA - TOTAL	\$3,739,147	

Source: National Institute for Health Data Book 1986.

NIH RESEARCH TRAINING TOP TEN STATES FISCAL YEAR 1986 (in thousands of dollars)

STATE	TOTAL	% OF TOTAL
1. California	\$ 35,252	16
2. MASSACHUSETTS	27,990	13
3. New York	24,376	11
4. Maryland	13,213	6
5. Pennsylvania	11,435	5
6. North Carolina	9,727	4
7. Illinois	8,737	4
8. Connecticut	8,565	4
9. Washington	7,621	4
10. Texas	7,466	3
USA - TOTAL	\$ 217,149	

Source: National Institute for Health Data Book 1986.



RESEARCH

Massachusetts is a major center for medical and biological research. There are several ways to measure the level of research occurring in Massachusetts, but perhaps the best measure is the amount of federal dollars flowing into the state's universities and research centers (see Table 5). Most research and development funding in the life sciences is sponsored by the National Institute of Health (NIH) or the National Science Foundation (NSF). According to the latest NIH Data Book, Massachusetts with only 2.4 percent of the U.S. population received 13 percent of all NIH grants for research and development and 13 percent of all grants for research training. For both research and development and funding for research training the top ten states account for 80 percent and 70 percent of all NIH/NSF funding respectively.

An additional measure of the research activity in Massachusetts is the number of doctoral scientists residing in Massachusetts in comparison to other states (see Table 6). What needs to be kept in mind when reviewing the following table is that except for Maryland and North Carolina which have comparable populations, the other states listed range from two to five times the population of Massachusetts.

The largest part of Massachusetts' research industry is comprised of university labs, centers and institutes. In order to give a flavor of the type of research occurring in Massachusetts a description of a few of the university research facilities in the state is listed below:

M.I.T.

Resources at M.I.T. include the Clinical Research Center, with a 12-bed hospital and outpatient services, the Center for Cancer Research, and the Biotechnology Process Engineering Centers. M.I.T. is also affiliated with the Whitehead Institute for Biomedical Research and the Harvard-M.I.T. Division of Health Sciences and Technology, which awards a joint M.D./Ph.D degree.

Biotechnology Process Engineering Center (BPEC)

A \$20 million engineering research center initiative of the National Science Foundation. The BPEC is the first NSF-sponsored national center. Established at M.I.T. in 1985, the BPEC provides cross-disciplinary educational and research programs and maintains an active involvement with industry. The center is conducting generic applied research involving biotechnology scale-up and manufacturing, as well as training students and providing short-term courses and lab practicum for scientists from industry. The center hopes to address advanced concepts in the manufacturing of complex therapeutic proteins. The three main areas currently being researched include biological principles in protein production, engineering principles in protein production, and downstream processing in biotechnology.

The BPEC has an industrial consortium comprised of companies in the biotechnology industry. Through the Technical Coordination and Technology Transfer offices, consortium members are kept upto-date on new technological discoveries and other activities occurring at the center. The Consortium also provides its members with updated lists of graduates available for employment, highlighting specific with areas of expertise and other relevant information.

The center provides personnel exchange programs in which participants may come to the center to learn about biotechnology from the basics onward, gaining valuable laboratory experience. Since 1985, over twenty visiting scientists from around the world have participated in BPEC programs for periods ranging from three months to one year. Undergraduate participants in BPEC currently number 73 and come from thirteen different departments at M.I.T. In 1987, a total of sixteen post-doctoral research associates were involved with the Center.

The Whitehead Institute

A non-profit, independent basic research and teaching institution. The Institute is affiliated with M.I.T. in its teaching activities, but its

finances and staff are wholly its own responsibility. Some of the nation's most renowned scientists are directing the laboratories and research projects at the Institute. David Baltimore, one of the youngest recipients of the Nobel Prize in Physiology or Medicine, is currently engaged in research there.

The Institute offers a unique fellowship program which provides three to five year appointments to promising young scientists, giving them laboratory space and independent status to pursue their research without teaching responsibilities.

TUFTS UNIVERSITY

Biotechnology Engineering Center (BEC)

The BEC is an interdisciplinary education, research, and development center that sponsors educational programs and conducts basic and applied research in biochemical process technology. The center's pilot fermentation plant is one of the largest academically based facilities of its kind in New England. Collaboration with a number of biotechnology companies enables the BEC to address specific problems in microbial fermentation, mammalian cell culture, scale-up, product purification techniques, and applied enzymology. The National Science Foundation has just awarded the center a \$670,000 grant.

In a collaborative effort with the researchers at Tufts University School of Medicine and the Massachusetts General Hospital, scientists at the BEC hope to simplify the preparation of cells that search out and destroy cancerous tumors. The center's researchers are also working to promote human and animal health in Third World countries through the production of new vaccines and diagnostics. The center's capabilities in such areas as gene manipulation, fermentation, and mammalian cell culture enhance ongoing research at Tufts in infectious diseases, parasitology, immunology, and other areas relevant to Third World health problems being addressed by the University's Veterinary and Medical schools and the School of Nutrition.

NUMBER OF DOCTORAL SCIENTISTS IN THE LIFE SCIENCES TOP TEN U.S. STATES (1983)

STATE	BIOLOGICAL SCIENCES
 California New York Maryland Texas Pennsylvania Illinois MASSACHUSETTS North Carolina Ohio Michigan 	7,013 5,748 3,460 3,179 2,812 2,646 2,639 2,011 1,993 1,929
-	

STATE	MEDICAL SCIENCES
1. New York	2,690
2. California	2,451
3. Pennsylvania	1,504
4. Maryland	1,343
5. Texas	1,236
6. Illinois	1,226
7. Michigan	1,061
8. Ohio	879
9. MASSACHUSETTS	842
10. New Jersey	783

Source: Statistical Abstract 1985 (National Science Foundation)

TRAINING RESOURCES: BAY STATE SKILLS CORPORATION

The Bay State Skills Corporation (BSSC) was incorporated in 1981 to provide training programs for high demand occupations in Massachusetts and is the primary training organization in the state. Companies qualifying for training assistance enter into a memorandum of agreement with the BSSC, specifying the type of training desired. BSSC then arranges for delivery of the training by non-profit training organizations within the state's education systems or from the private sector.

BSSC's 50/50 Matching Grant Program provides non-restrictive funds to develop specialized training for skills from entry to advanced levels. BSSC requires that participating companies match BSSC funds by giving of their staff time and expertise, by donating equipment and supplies, and by offering internships or other contributions of value which will directly transfer corporate expertise into the educational setting. Contributions from the company many include cash, equipment, instructors, and other components of a good strong training program. The training take place at existing schools, college and universities, and training centers in the state. If the company prefers, its own facilities and employees may be used as part of its in-kind contribution.

In 1986-1987, BSSC awarded \$1.9 million to 26 educational institutions to train 1,152 people.

Examples of BSSC 50/50 Matching Grant Program in biotechnology are outlined on the following pages:

1. BOSTON UNIVERSITY/BIOMEDICAL LABORATORY AND CLINICAL SCIENCES (1987-1988)

PROGRAM: Two courses for an Associate and Bachelors of

Science degree.

AUDIENCE: Medical technicians seeking advancement; high

school graduates; employed individuals seeking

career change.

CURRICULUM: -Medical Terminology and Microcomputers

-Introduction to Biomedical Laboratory Sciences

PRIVATE NEN Medical Products; Damon Clinical Hemagen

SECTOR Diagnostics, H.P. Hood, Inc.

PARTNERS:

2. TUFTS UNIVERSITY/BIOTECHNOLOGY, BIOCHEMICAL ENGINEERING (1987)

PROGRAM: Biotechnology Processing

AUDIENCE: 15 graduated students in the Biotechnology

Engineering Center under the auspices of the College

of Special Studies at Tufts.

CURRICULUM: Lectures:

-microbial fermentation

-preparative mammalian cell culture

-protein/enzyme purification

-pilot plant and production operations

-analytical biochemistry

-quality control-regulatory affairs

-Lab work in pilot plant operations, company

visits

PRIVATE

Instrumentation Laboratory, Cambridge Research

SECTOR PARTNERS:

Laboratory, Hygeia Science, BioRational Technologies, Northeast Cryogenics, Inc.

3. TUFTS UNIVERSITY/BIOTECHNOLOGY PROCESS DEVELOPMENT (1986)

PROGRAM:

Biotechnology Process Development

AUDIENCE:

15 students in entry level training

17 students in advanced level training

CURRICULUM:

Entry level training for biotechnology plant

technicians

Advanced level courses were developed: -principles of cell and microbe cultivation

-biotechnology processing projects laboratory

PRIVATE SECTOR

PARTNERS:

A.D. Little, Bioassy Systems Research Corp., Biofluids, Inc., Biopure Fine Chemicals, Biogen,

Charles River Laboratories, DAmon Biotech, Du Pont

NEN, Genetics Institute, Hygeia Sciences, Waters

Chromatography

4. TUFTS UNIVERSITY/MEMBRANE SEPARATION (1988)

PROGRAM:

Development and presentation of a course which will provide participants with fundamentals and practical aspects of membrane processes.

AUDIENCE:

Graduate and advanced undergraduate students

enrolled in degree programs at Tufts in

engineering and science fields; individuals currently

employed in the chemical/biotechnology

processing industries

CURRICULUM: Presentation on the full spectrum of industrially

practiced membrane separation-ultra and micro

filtration, reverse osmosis, electrodialysis, membrane distillation and extraction, and

membrane bioreactors

PRIVATE SECTOR

Abcor/Koch Membrane Systems, A.G. Technology,

Amicon, Ionics, Memteck Corp, Sepracor

PARTNERS:

WORCESTER POLYTECHNIC INSTITUTE/PROTEIN PURIFICATION 5. & SEPARATION METHODS (1986)

PROGRAM: Protein purification and separation methods

AUDIENCE: 18 graduate students pursuing M.S. and Ph.D

degrees in Biotechnology and/or Chemical

Engineering

CURRICULUM: Advanced level, 10-hour per week full semester

> course. Course offers hand-on training in the methods necessary to assist in the design and implementation of product/protein processing for

the biotechnology industry

PRIVATE Biopure Fine Chemicals, Integrated Genetics,

SECTOR Millipore Corp., Zymark Corp.

PARTNERS:





A/G Technology Corporation

34 Wexford Street Needham, MA 02194

Tel: 617-449-5774

Established: 1981 Employees: 10

Contact: Mr. Myles Kleper, Vice President

Product Code:

Suppliers

Product Description:

Purification and Separation Devices; Ultrafiltration and microfiltration hollow fiber membranes cartridges; steam-in-place process scale ultrafiltration and microfiltration; oxygen enriched air generation systems

Abiomed Corp.

33 Cherry Hill Dr. Danvers, MA 01923

Tel: 508-777-5410 Fax: 508-777-1561

Established: 1981 Employees: 65

Contact: Mr. David Lederman, President

Product Code: Diagnostic

Product Description:

Medical laser and imaging equipment

Acra-Cut, Inc.

989 Main Street Acton, MA 01720

Tel:

508-263-2210

Fax:

508-263-4102

Established:

1983

Employees:

20

Contact:

Mr. John Baker, President

Product Code:

Medical/Surgical

Product Description:

Disposable and reusable cranial perforators for neuro-surgery; units for adult and pediatrics in a variety of sizes

Advanced Instruments, Inc.

1000 Highland Avenue

Needham Heights, MA 02194

Tel:

617-449-2000

Fax:

617-455-8468

Established:

1955

Employees:

100

Contact:

Mr. Romano Micciche, President

Product Code:

Medical/Surgical; Laboratory

Product Description:

Biomedical equipment for clinical labs, emergency rooms, Intensive Care Units, pediatric and neonatal wards

Advanced Magnetics, Inc.

61 Mooney Street

Cambridge, MA 02138

Tel:

617-497-2070

Fax:

617-497-6927

Established:

1982 16

Employees: Contact:

Mr. Jerome Goldstein, President

Product Code:

Diagnostics; Suppliers

Product Description:

Radioimmunoassay kits for prostanglandins, leukotrienes, HETEs and cyclic nucleotides, magnetic affinity separations solid phases for radioimmunoassays, DNA probe assays, cell sorting; custom work immunoassays and magnetic separation

Advanced Mechanical Technology Inc.

151 California Street Newton, MA 02158

Tel:

617-964-2042

Fax:

617-964-6234

Established:

1976

Employees:

46

Contact:

Dr. Walter Syniuta, President

Product Description:

Produce force torque platforms, gait analyzers and physiological telemetry units used primarily in sports medicine applications

Advanced NMR Systems

30 Sonar Drive Woburn, MA 01801

Tel:

617-938-6046

Fax:

617-938-8022

Established:

1983

Employees:

23

Contact:

Mr. Ian Pykett, President

Product Code: Diagnostic; X-Ray

Product Description:

Nuclear magnetic resonance imaging tomography systems; used in clinical and research applications including the development of high speed imaging and multi-nuclear imaging

Alkermes, Inc.

26 Landsdown Street Cambridge, MA 02139

Tel:

617-494-0171

Fax:

617-494-9263

Established:

1988

Employees:

14

Contact:

Mr. Stuart Davidson, President

Product Code:

Therapeutics

Product Description:

Research and Development for carrying CNS therapeutics across blood brain barrier; Drug Research and Development: cancer, neurodegenerative disorder, AIDS dementia; Delivery strategies using endogenous protein and CNS homing agents

Alko Diagnostic Corp.

333 Fiske Street Holliston, MA 01746

Tel: 508-429-4600 Fax: 508-429-4900

Employees: 13

Contact: Mr. Alexander Kovacs, President

Product Code:

Diagnostic; Laboratory

Product Description:

Manufacture consumable reagents and labware electrodes and other accessories for clinical laboratory instruments. Specialize in supplies for automated electrolyte, pH blood gas and chemistry analyzers

American BioAnalytical Inc.

10 Huron Drive Natick, MA 01760

Tel: 508-655-4336

Established: 1974 Employees: 12

Contact: Mr. Vincent Cooney, President

Product Code: Laboratory

Product Description:

Manufacture cell culture media, laboratory reagents, and bacteriological filters

American Biotechnologies

359 Allston Street

Cambridge, MA 02139

Tel:

617-547-5535

Fax:

617-876-1268

Established:

1987

Employees:

18

Contact:

Mr. Simon McKenzie, President

Product Code:

Suppliers

Product Description:

Intermediate components and custom services plasnio production, oligonucleotide synthesis, bacteriophage production vector construction, subcloning, diagnostic screening (viral), monoclonal antibody screening and production

American Optical Corp.

14 Mechanic Street

Southbridge, MA 01550

Tel:

508-765-9711

Employees:

3800

Contact:

Mr. Maurice J. Cunniffe, Chairman and CEO

Product Code:

Ophthalmic

Product Description:

Manufacture eyeglass frames and lenses, hard and soft contact lenses, and ophthalmic supplies and accessories

Amicon Division

(W.R. Grace and Co.) 24 Cherry Hill Drive Danvers, MA 01923

Tel:

617-777-3622

Fax:

617-777-6204

Established:

1963

Employees:

300

Contact:

Mr. Peter Rigopulos, President

Product Code:

Suppliers

Product Description:

Ultrafiltration membrane devices for separation of molecular and particulate components; chromotographic media, columns and systems for refined purification process, hollow fiber cell culture apparatus and serum free media; blood filtration

Andonian Cryogenics Inc.

26 Farwell Street

Newtonville, MA 02160

Tel:

617-969-8010

Employees:

32

Contact:

Mr. Martin Andonian, President

Product Description:

Manufacture cryogenic instrumentation and containers, including liquid nitrogen and liquid helium containers, tranfer lines, level gauges and level controls

Angenics, Inc.

100 Inman Street

Cambridge, MA 02139

Tel: 617-876-6468 Fax: 617-876-7965

Established: 1981 Employees: 65

Contact: Mr. Andre de Bruin, President

Product Code:

Diagnostics; Animal

Product Description:

BEST TEST (tm): bovine estrogen levels; SPOT TEST (tm): antibiotics in milk; research in latex agglutination assays and delivery systems for a wide range of human and animal diagnostics

Angiographic Devices, Corp.

300 Foster Street Littleton, MA 01460

Tel: 508-486-4997 Fax: 508-486-9363

Established: 1980 Employees: 7

Contact: Mr. John Grady, President

Product Code:

X-Ray

Product Description:

Cardiac Catheterization and general angiographic medical X-Ray systems

Applied Biotechnology

80 Rogers Street

Cambridge, MA 02142

Tel:

617-492-7289

Fax:

617-492-8438

Established:

1983

Employees: Contact:

44 Mr. Steven Peltzman, President

Product Code:

Therapeutics; Diagnostics; Animal

Product Description:

Research and development of vaccines and ocogene-based cancer products through advanced biology and recombinant technology. Focus: recombinant live virus systems and production for preservation of animal and human infectious diseases: swine pseudorabies, leprosy

Applied Fiberoptics, Inc.

East Main Street

Southbridge, MA 01550

Tel:

508-765-9121

Fax:

508-764-3639

Established:

1968

Employees:

25

Contact:

Mr. J. Will Hicks, President

Product Code:

Medical/Surgical

Product Description:

Fiber optic cables, high intensity light sources, operating head lights, hand held lighted surgical instruments, microscopes and cloposcopes

Applied Protein Technologies

103 Brookline Street Cambridge, MA 02139

Tel:

617-868-6085

Established:

1984

Employees:

25

Contact:

Mr. Marcus Horn, President

Product Code:

Chemicals; Suppliers

Product Description:

Manufactures instrumentation and reagents in the fields of peptide and protein chemistry; also maintains laboratory services directed at protein and peptide chemistries

Applied Science Laboratories

334 Bear Hill Road Waltham, MA 02154

Tel:

617-890-5100

Fax:

617-890-7966

Established:

1961

Employees:

25

Contact:

Mr. Robert Sinclair, President

Product Code:

Ophthalmic

Product Description:

Manufactures high performance opthalmological diagnostic instrumentation including eye view monitoring, corneal thickness measurement, and eye tracking systems

APV Gaulin

44 Garden Street Everett, MA 02149

Tel:

617-387-9300

Fax:

617-387-4431

Established:

1909

Employees:

150

Product Code:

Suppliers

Product Description:

Cell disruption homogenizers; heat exchangers

Aspen Technology

251 Vassar Street

Cambridge, MA 02139

Tel:

617-497-9010

Fax:

617-497-7806

Established:

1981

Employees:

60

Contact:

Mr. Joseph Boston, President

Product Code:

Suppliers

Product Description:

Software to simulate bioprocessing operations, i.e., sterilization, fermentation, centrifugation, cell disruption, membrane separations, chromatography; applies technology to solve problems in bioprocess development, scale-up, and optimization

Autochrom Inc.

113 Cedar Street, Suite 3

Milford, MA 01757

Tel:

508-478-2670

Fax:

508-478-0217

Established:

1980

Employees:

10

Contact:

Mr. Thomas Clemow, President

Product Code:

Laboratory

Product Description:

Manufacturer of automated instrumentation used in data analysis and reduction of liquid chromatographs; products include data collection and storage software

AVP Advanced Video Product

29 Domino Drive

Concord, MA 01742

Tel:

508-371-7130

Fax:

508-369-8644

Established:

Employees:

1985

24

Contact:

Ms. Catherine Goliash, President

Product Description:

Image display, transmission archiving

Bard Cardiosurgery

129 Concord Road Billerica, MA 01821

Tel:

508-663-5353

Fax:

508-663-9250

Established:

1984 200

Employees: Contact:

Mr. Daniel Mulvena, President

Product Code:

Medical/Surgical; Implants/Prostheses

Product Description:

Manufacture specialty products used in cardiopulmonary bypass surgery, including oxygenators, cardiotomy reservoirs, hemo-concentrators, and extracorporeal cannulae

Bard MedSystems Division

87 Concord Street

North Reading, MA 01864

Tel:

508-664-5900

Fax:

508-664-0013

Established:

1968

Employees:

375

Contact:

Mr. Dan Johanson, Vice President and General Manager

Product Code:

Suppliers

Product Description:

Manufacture infusion pumping systems, unit-dose medicine carts and casework, pharmacy packaging systems, and pharmacy computer systems

Betagen Corporation

100 Beaver Street Waltham, MA 02154

Tel:

617-899-3400

Fax:

617-899-7063

Established: 1985

Employees:

35

Contact:

Mr. Robert DePasqua, President

Product Code:

Suppliers

Product Description:

Automated systems for genetic analysis; two-dimensional, radiation imaging system for DNA research called the Betascope 603 Blot Analyzer

Biogen, N.V.

14 Cambridge Center Cambridge, MA 02142

Tel:

617-864-8900

Fax:

617-491-1228

Established:

1978

Employees: 250

Contact:

Mr. James Vincent, CEO

Product Code:

Diagnostics; Therapeutics; Animal

Product Description:

Research on products for the AIDS therapeutics, anti-inflamation and selected cancer markets

Biomedical Technologies, Inc.

378 Page Street

Stoughton, MA 02072

Tel:

617-344-9942

Fax:

617-341-1145

Established:

1981 10

Employees: Contact:

Mr. Maurice Lamarque, President

Product Code:

Diagnostics; Chemicals; Suppliers

Product Description:

Cell cuture products, radioimmunoassay kits and components, enzyme immunoassay kits, immunohistochemical reagents and kits, polyclonal and monoclonal antibodies, proteins and other labeling reagents; radioactive products also produced

Bionostics Inc.

8 Craig Road

Acton, MA 01720

Tel:

617-263-3856

Established:

1983

Employees:

30

Contact:

Mr. Bruce Williams, President

Product Code:

Laboratory; Diagnostic

Product Description:

Manufacture chemicals, reagents and controls for blood gas analyzers

Biopure Corporation

68 Harrison Avenue Boston, MA 02111

Tel: 617-350-7800 Fax: 617-350-6614

Established: 1984 Employees: 34

Contact: Mr. Brian McGuinn, President

Product Code:
Therapeutics

Product Description:

Purified oxygen transport medium for in vitro for use in lab research in conjunction with liposome encapsulation, blood substitute development, polymerization, coacervation, tissue perfusion and extracorporeal organ studies; development of biochemical separation

Biosurface Technology

One Kendall Square

Building 200

Cambridge, MA 02139

Tel: 617-494-8484 Fax: 617-494-6561

Established: 1986 Employees: 31

Contact: Mr. Dave Castaldi, President

Product Code: Therapeutic

Product Description:

Epithelial cell culturing service - small skin biopsies obtained from patients are cultured and grown into living sheets of transplantable epithelial tissue

BioTechnica International, Inc.

85 Bolton Street

Cambridge, MA 02140

Tel:

617-864-0040

Fax:

617-491-0813

Established:

1981

Employees:

200

Contact:

Mr. Norman Jacobs, President

Product Code:

Diagnostics; Agriculture; Chemicals

Product Description:

DMDx test for periodontal disease; Silage inoculant; conventional seeds through seed company subsidiary research enzymes, research in improved genetic engineering of plant and agriculture microorganisms, genetic engineering of industrial yeast

Biotechnology Development Corporation

44 Mechanic Street Newton, MA 02164

Tel:

617-965-7255

Fax:

617-965-6952

Established:

1983

Employees:

30

Contact:

Mr. Irwin Gruverman, President

Product Code:

Suppliers

Product Description:

Pharmaceuticals, Cosmetics, High Tech Process Equipment, Surface Acoustic Sensor Devices

Boston Biomedical, Inc.

375 West Street

West Bridgewater, MA 02379

Tel:

508-580-1900

Fax:

508-580-2202

Established:

1988

Employees:

18

Contact:

Mr. Richard Schumacher, President

Product Code:

Diagnostics; Suppliers

Product Description:

Processing of blood based components for infectious disease diagnosis test systems; Focus: HIV (AIDS), HTLV (adult T-cell leukemia) and viral hepatitis; offers facility as site for clinical trials to in-vitro test kit manufacturers

Boston Scientific Corp.

480 Pleasant Street

Watertown, MA 02172

Tel:

617-926-5026

Established:

1980

Employees:

350

Contact:

Mr. Peter Nicholas, President

Product Code:

Medical/Surgical

Product Description:

Electrodes, cables, leads and gels, needles, syringes, tubings, tubes and catheters

Bryan Corp.

8 Johnson Street Woburn, MA 01801

Tel: 617-935-0004

Employees: 10

Contact: Mr. Frank Burton, President

Product Code: Medical/Surgical

Product Description:

Manufacture fiberoptic examining equipment and accessories, including osteoscopes, bronchoscopes, laparoscopes, hysteroscopes, endoscopic forceps and bronchial tubes

Cambridge Analytical Associates, Inc.

1106 Commonwealth Avenue

Boston, MA 02215

Tel: 617-232-2207 Fax: 617-731-1358

Established: 1979 Employees: 100

Contact: Mr. Martin Wolf, President

Product Code: Environmental

Product Description:

Destruction of chemical wastes in soil and groundwater using naturally occurring micro-organisms; provide chemical analysis services and hazardous waste remediation services

Cambridge BioScience

365 Plantation Street Worcester, MA 01605

Tel: 508-797-5777

Fax: 508-797-4014

Established: 1981 Employees: 105

Contact: Mr. Gerald Buck, Chairman and CEO

Product Code:

Diagnostics; Therapeutics; Animal

Product Description:

AIDS Diagnostics and other diagnostics including for the detection of rotavirus, adenovirus group antigens, gastroenteritis and respiratory viruses; also developing vaccines

Cambridge Medical Technology

575 Middlesex Turnpike

Billerica, MA 01865

Tel: 508-667-2161 Fax: 508-667-8651

Established: 1960 Employees: 55

Contact: Mr. Joseph Carroll, President

Product Code:

Diagnostics; Animal

Product Description:

Broad range of immuno diagnostic kits with clinical and veterinary applications

Cambridge Neuroscience Research, Inc.

One Kendall Square, Bldg. 700

Cambridge, MA 01239

Tel:

617-225-0600

Fax:

617-225-2741

Established:

1986 33

Employees: Contact:

Mr. Alan Dalby, President

Product Code:

Therapeutics

Product Description:

Development of patented products for the diagnosis, treatment and prevention of neurological and psychiatric disorders

Cambridge Research Laboratory

195 Albany Street

Cambridge, MA 02139

Tel:

617-491-2300

Fax:

617-868-6352

Established:

1981

Employees:

52

Contact:

Mr. Louis Kamentsky, Director

Product Code:

Diagnostics

Product Description:

Diagnostic reagents and kits

Cambridge Technology, Inc.

23 Elm Street

Watertown, MA 02172

Tel:

617-923-1181

Established:

1979

Employees:

15

Contact:

Mr. Edward Grenda, President

Product Code:

Suppliers

Product Description:

Cell harvesting instruments for laboratory automation

Candela Laser Corp.

530 Boston Post Road Wayland, MA 01778

Tel:

508-358-7637

Fax:

508-358-5602

Established:

1970

Employees:

105

Contact:

Dr. Horace Furumoto, CEO

Product Code:

Medical/Surgical

Product Description:

Manufacture flashlamp excited dye lasers and related accessories

Cardiodata Corp.

71 Lyman St

Northboro, MA 01532

Tel:

508-393-6330

Fax:

508-393-7594

Established:

1971

Employees:

36

Contact:

Mr. Charles Feldman, President

Product Code:

Monitoring

Product Description:

Manufacture holter monitoring equipment

Cardiovascular Instrument Corp.

134 Water Street

Wakefield, MA 01880

Tel:

617-245-7799

Established:

1965

Employees:

12

Contact:

Mr. Edward Urkiewicz, President

Product Code:

Medical/Surgical

Product Description:

Manufacture a line of heart/lung equipment and related accessories

Cellcor Therapies, Inc.

1256 Soldiers Field Road

Boston, MA 02135

Tel:

617-782-2204

Fax:

617-782-2132

Established: Employees:

1987

Onnahan

28

Contact:

Mr. Gary Cashon, President

Product Code:

Diagnostics

Product Description:

Currently conducting clinical research trials in the use of in-vitro activated lymphocytes for the treatment of Renal Cell Carcinoma. Research is being conducted at five sites around the U.S.A.; Research in antigen specific cancer therapy as well as utilizing their lymphocyte immunization process for transplantation

Charles River Biotechnical Services

251 Ballardvale Street Wilmington, MA 01887

Tel: 508-657-6500

Established:

1982

Employees:

100

Contact:

Mr. James Foster, President

Product Code:

Suppliers

Product Description:

Contract production of monoclonal antibodies in mouse fluid and utilizing Charles River Biotechnical Services's patented Opticell cell culture technology. Also engaged in sale of Opticell systems to companies for inhouse cell culture production

ChemDesign Corporation

99 Development Road Fitchburg, MA 01420

Tel:

508-345-9999

Fax:

508-342-9769

Established:

1983

Employees:

50

Contact:

Mr. Richard Brooks, President

Product Code:

Chemicals; Suppliers

Product Description:

Production of protected amino acids, large intermediate, small-scale production of protected amino acids on a custom basis and separation technologies

ChemGenes Corporation

925 Webster Street Needham, MA 02192

Tel:

617-449-5051

Established:

1981

Employees:

10

Contact:

Dr. Suresh Srivastava, President

Product Code:

Suppliers

Product Description:

DNA chemical intermediates and biomedical diagnostic DNA

Collaborative Research, Inc.

2 Oak Park

Bedford, MA 01730

Tel:

617-275-0004

Fax:

617-275-0043

Established:

1961

Employees:

130

Contact:

Dr. Orrie Friedman, President

Product Code:

Diagnostics; Therapeutics; Chemicals; Suppliers

Product Description:

Development of diagnostic tests for genetic diseases based on DNA probe technology

Computer Design and Application

8 Centennial Drive

Peabody, MA 01961

Tel:

508-977-3030

Fax:

508-977-9220

Established:

1977

Employees:

100

Contact:

Mr. David Birhner, President

Product Code:

Diagnostic; X-Ray

Product Description:

Manufacture medical imaging systems

Cordell Engineering

6 Centennial Drive Peabody, MA 01960

Tel: 508-532-4200 Fax: 508-532-6877

Established: 1963 Employees: 50

Contact: Mr. Richard Reedy, President

Product Code:

X-Ray

Product Description:

Equipment that develops medical and dental x-ray film

CoStar Corp.

One Alewife Center Cambridge, MA 02140

Tel: 617-868-6200 Fax: 617-868-2076

Established: 1946 Employees: 400

Contact: Mr. Richard Morningstar, President

Product Code: Laboratory

Product Description:

Manufacture disposable laboratory products and filtration devices

Covalent Associates, Inc.

52 Dragon Court Woburn, MA 01801

Tel:

617-938-1140

Established:

1981

Contact:

Dr. Victor Koch, President

Product Code:

Suppliers

Product Description:

Conducts research and development on novel biosensor concepts; exploring surface-selective chemically modified electrodes for a variety of applications in fermentation processes

Creative Biomolecules

35 South Street

Hopkington, MA 01748

Tel:

508-435-9001

Established:

1981

Employees:

21

Contact:

Dr. Charles Cohen, President

Product Code:

Suppliers

Product Description:

Technology for the commercial-scale production of protein-based products

Crystal Diagnostics

30 Commerce Way Woburn, MA 01801

Tel: 617-933-4114 Fax: 617-935-2865

Established: 1982 Employees: 35

Contact: Mr. John Schulte, President

Product Code:

Diagnostics; Environmental

Product Description:

Developing disposable diagnostic services capable of quantitatively measuring substances in blood and urine

Damon Biotech, Inc.

119 Fourth Avenue

Needham Heights, MA 02194 Tel: 617-449-6002 Fax: 617-449-4010

Established: 1983 Employees: 100

Contact: Mr. Joseph Lovett, Sr. Vice President

Product Code:

Diagnostics; Therapeutics; Animal; Chemicals

Product Description:

Contract production of monoclonal antibodies for use in human health care industry; Research: production of chimeric antibodies, recombinant antibodies and controlled release technology for hormones and vaccines

Damon Corp.

115 Fourth Avenue

Needham Heights, MA 02194

Tel:

617-449-0800

Fax:

617-449-0588

Established:

1958

Employees:

3400

Contact:

Mr. David Kosowsky, CEO

Product Code:

Laboratory

Product Description:

Manufacture centrifuges, clinical laboratory products, coagulation testing equipment, micotomes and cryogenic mictrotomes

Damon Corp.

Ultrasound Division

115 Fourth Street

Needham Heights, MA 02194

Tel:

617-449-0800

Fax:

617-449-7547

Established: 1986

Employees: Contact:

Mr. Daniel Cotte

Product Code:

Medical/Surgical

Product Description:

Portable ultrasound scanner

Dan Kar Corporation

P.O. Box 279

Reading, MA 01867

Tel:

617-944-1550

Established:

1976

Employees:

10

Contact:

Mr. Terry Hahan

Product Code:

Suppliers

Product Description:

Protein and DNA sequencer equipment

Diagnostic Electronics Corp

221 Crescent Sreet Waltham, MA 02154

Tel:

617-893-4000

Fax:

617-893-7343

Established:

1968

Employees:

15

Contact:

Mr. Greg Wortheimer, President

Product Code:

Monitoring

Product Description:

Manufacture medical electronics equipment

Dynamedics Inc.

P.O. Box 51

Lincoln, MA 01773

Tel:

617-899-4433

Established:

1985

Employees:

2

Contact:

Mr. Richard Wiggin, President

Product Code:

Monitoring

Product Description:

Manufacture products for ambulatory and physician office blood pressure monitoring and measurement

Dynatech Corp.

3 New England Executive Park

Burlington, MA 01803

Tel:

617-272-6100

Fax:

617-272-2304

Established:

1959

Employees:

3100

Contact:

Mr. J.P. Barger, President

Product Code:

Laboratory

Product Description:

Manufacture electronic-based test and measurement instruments for laboratory applications

Dyonics Inc.

160 Dascomb Road Andover, MA 01810

Tel:

508-470-2800

Fax:

508-470-2193

Established:

1964 210

Employees: Contact:

Mr. Charles Federico, President

Product Code:

Medical/Surgical

Product Description:

Manufacture arthroscopy and orthopedic surgical instruments, light sources and light guides

Endogen, Inc.

451 D Street

Boston, MA 02210

Tel:

617-439-3250

Established:

1983

Employees:

10

Contact:

Mr. Phillip Servidori, VP Sales and Marketing

Product Code:

Diagnostics; Therapeutics; Chemicals; Suppliers

Product Description:

Diagnostic research ELISA's and research reagents

Enzyme Center, Inc.

36 Franklin Street Malden, MA 02148

Tel:

617-322-4885

Employees:

30

Contact:

Mr. Stanley Charm, President

Product Code:

Suppliers

Product Description:

Large scale fermentation, separation and purification of enzymes and biological material

Enzytech, Inc.

763 D Concord Avenue Cambridge, MA 02138

Tel:

617-661-0940

Fax:

617-864-5824

Established:

1987

Employees:

14

Contact:

Mr. Mark Skaletesky, CEO

Product Code:

Food; Chemicals

Product Description:

Delivery systems for protein drugs; stabilization, modification, use and delivery of catalytically and therapeutically active proteins and polypeptides; development of natural, functional food ingredients using enzymes in non-traditional environment

ESA, Inc.

45 Wiggins Avenue Bedford, MA 01730

Tel: 617-275-0100 Fax: 617-275-5529

Established: 1968 Employees: 100

Contact: Mr. A.V. Block, President

Product Code: Laboratory

Product Description:

HPLC instrumentation and electrochemical detectors for biomedical research

Fenwal Electronics, Inc.

450 Fortune Boulevard Framingham, MA 01757

Tel: 508-478-6000 Fax: 508-473-6035

Established: 1955 Employees: 340

Contact: Mr. William Degnan Jr., President

Product Code:

Monitoring; Medical/Surgical

Product Description:

Thermistor (temperature sensitive resistor) assemblies primarily for measurement of temperature and blood flow

Filtron Technology Corporation

500 Main Street P.O. Box 119

Clinton, MA 01510

Tel:

508-368-8582

Fax:

508-368-7734

Established:

1984

Employees:

20

Contact:

Mr. Martin Hirsch, President

Product Code:

Suppliers

Product Description:

Ultrafiltration systems and devices

Fiske Med-Science Inc.

1000 Highland Ave

Needham Heights, MA 02194

Tel:

617-449-4034

Fax:

617-455-8468

Established:

1953

Employees:

45

Contact:

Mr. Romano Micciche, President

Product Code:

Diagnostic; Laboratory

Product Description:

Manufacture osmometers, cryoscopes, titrators and pulmonary function test equipment

Gene-Trak Systems

31 New York Avenue Framingham, MA 01701

Tel:

508-872-3113

Fax:

508-879-6462

Established:

1986

Employees:

133

Contact:

Mr. Patrick Connoy, President

Product Code:
Diagnostics; Food

Product Description:

Nucleic acid probe tests for the detection of infectious pathogens (salmonella and listeria), HIV-1. Research: development of non-isotopic probe based tests for detection of pathogens in food and clinical samples; developing instrumentation to automate DNA probe technology

Genemsco Corporation

Genemsco Beach Kingston, MA 02364

Tel:

617-585-3894

Established:

1983

Employees:

10

Contact:

Mr. Lawrence Lee Slot, President

Product Code:

Environment; Suppliers

Product Description:

Supplies the eductional community with cell cloning and gene splicing modules called "Dr. Cloners Genetic Engineering Home Cloning Kits"; electrophoresis apparatus, Caprine-Arthritis-Encephalitis-Virus, and caragheen. Research: Mytilus edulis byass fiber genetics

General Scanning Inc.

500 Arsenal Street Watertown, MA 02172

Tel:

617-924-1010

Established:

1968

Employees:

250

Contact:

Mr. Charles Winston, President

Product Code:

Diagnostic; Monitoring

Product Description:

Manufacture recorder modules for biomedical instruments, galvanometers, and optical scanners. Also O.E.M. supplier to manufactuers of electromedical equipment such as monitors and defibrillators

Genetics Institute

87 Cambridge Park Drive Cambridge, MA 02140

Tel:

617-876-1170

Fax:

617-876-1504

Established:

1981

Employees:

400

Contact:

Mr. Tuan Ha-Ngoc, Senior Vice President

Product Code:

Therapeutics; Diagnostics

Product Description:

tPA; GM-CSF; EPO; Factor VIII; Interleukin-3; M-CSF; cancer therapeutics; bone growth factors; blood cell growth factors. Research in blood cell growth factors, coagulation and clot dissolution agents; bone growth factors and cancer therapeutics.

Gentest Corporation

6 Henshaw Street Woburn, MA 01801

Tel: 617-935-5115 Fax: 617-938-8644

Established: 1983 Employees: 7

Contact: Mr. Charles L. Crespi, President

Product Code: Suppliers

Product Description:

Research and development and characterization of cell lines containing specific capacities to metabolize drugs and environmental chemicals. Focus: in vitro models of human metabolism. Produce metabolically comptetent cell lines and Mutagenicity assays in metabolically competent cell lines

Genzyme Corporation

75 Kneeland Street Boston, MA 02111

Tel: 617-451-1923 Fax: 617-451-2454

Established: 1981 Employees: 258

Contact: Mr. Henri Termeer, President

Product Code:

Diagnostics; Therapeutics; Chemicals; Suppliers

Product Description:

Lymphokines for cellular immunology testing; Colony simululation factors and growth factors; Enzymes and inhibitors for glycoconjugates; glycoprotein remodelling technology; Therapetic enzymes for enzyme replacement therapy; Diagnostic enzymes and substrates for reagent

Haemonetics Corporation

400 Wood Road

Braintree, MA 02184

Tel:

617-484-7100

Established:

1971

Employees:

800

Contact:

Mr. John White, President

Product Code:

Laboratory

Product Description:

Manufacture specialized blood processing systems and related disposables used for blood collection and cell fractionation

Harbor Medical Devices Inc.

25 Drydock Avenue Boston, MA 02210

Tel:

617-482-8800

Fax:

617-482-5629

Contact:

Mr. William Barrett, Director of Marketing

Product Code:

Medical/Surgical

Product Description:

Manufacture implantable vascular access devices and disposable peripherals

Harvard Apparatus Inc.

22 Pleasant Street Natick, MA 01760

Tel:

508-655-7000

Fax:

508-655-6029

Established: Employees:

1903

Contact:

Mr. Paul Grindle, CEO

Product Code: Laboratory

Product Description:

Manufacture biotech research instrumentation, focusing on infusion pumping systems

Hewlett-Packard Medical Group

3000 Minuteman Road Andover, MA 01810

Tel:

508-687-1501

Established:

1957

Employees:

4000

Contact:

Mr. Benjamin Holmes

Vice President/General Manager

Product Code: Monitoring

Product Description:

Manufacture patient monitoring and life support systems

Hologic, Inc.

300 Bear Hill Road Waltham, MA 02154

Tel:

617-890-9944

Fax:

617-890-8031

Established: 1986

Employees:

65

Contact:

Mr. S. David Ellenbogen, President

Product Code:

Diagnostic; X-Ray

Product Description:

X-ray bone densitometers

Holometrix, Inc.

99 Erie Street

Cambridge, MA 02139

Tel:

617-868-8050

Established:

1986

Employees:

41

Contact:

Dr. Judith Kitchell, Manager, Biomaterials

Product Code:

Therapeutics; Animal; Agriculture; Environment; Chemicals

Product Description:

Structural protein design; Biomaterials. Research: controlled release of active agents; wound dressing systems; repair materials for avulsive maxillofacial injuries; solid waste disposal process development; biomass conversion to fuels and chemicals

Hygeia Sciences

330 Nevada Street Newton, MA 02160

Tel: 617-964-0200

Established: 1980 Employees: 120

Contact: Mr. Edward Covell, President

Product Code: Diagnostics

Product Description:

Pregnancy test; Ovulation prediction test; Strep throat test; Gonorrhea test. Research: development of diagnostic products utilizing monoclonal and polyclonal antibodies for use by both physicians and consumers

ImmunoGen, Inc.

148 Sidney Street Cambridge, MA 02139

Tel: 617-661-9312 Fax: 617-661-9334

Established: 1981 Employees: 30

Contact: Mr. Mitchell Sayare, President

Product Code: Therapeutics

Product Description:

Therapeutics for non-Hodgkin lymphoma; acute lymphoblastic leukemia; acute granulocytic leukemia; breast cancer; colorectal cancer; small cell lung cancer. Research: monoclonal antibody conjugates for treatment of cancer

Immunologic Pharmaceutical Corporation

One Kendall Square

Building 600

Cambridge, MA 02139

Tel:

617-494-0060

Fax:

617-494-1394

Established:

1987

Employees:

23

Contact:

Mr. Gustav Christiansen, President

Product Code:

Diagnostics; Therapeutics

Product Description:

Research on the human immune system

Immunotech Corporation

90 Windom Street Boston, MA 02134

Tel:

617-787-1010

Established:

1980

Employees:

26

Contact:

Mr. Francis Capitanio, President

Product Code:

Diagnostics

Product Description:

Enzyme immunoassay test kits for various thyroid, steroid and drug tests

Imreg, Inc.

One Kendall Square, Building 400

Cambridge, MA 02139

Tel:

617-577-1066

Fax:

617-577-1198

Established:

1986

Employees:

40

Contact:

Mr. A. Arthur Gottlieb, President

Product Code:

Diagnostics; Therapeutics; Animal

Product Description:

Patented biologics for treatment and diagnosis in which immune function is altered; these include IMREG-1 and IMREG-2 and other proprietary "immunomodulators", are derived from white blood cells and appear to be important, previously uncharacterized regulators of the human immune systems. The IMREG immunomodulators have the potential to treat and diagnose human diseases characterized by abnormal functions of the immune system: AIDS, ARC, Rheumatoid arthritis, Leprosy, some cancer, Type I Diabetes Mellitus; reactions to some toxic plants

Industrial and Biomedical Sensors Corp.

1393 Main Street Waltham, MA 02154

Tel:

617-891-4201

Established:

1975

Employees:

15

Contact:

S. Chang, President

Product Code:

Monitoring

Product Description:

Manufacture blood pressure monitors

Integrated Chemical Sensors Corporation

44 Mechanic Street Newton, MA 02164

Tel:

617-965-6950

Established:

1985

Employees:

10

Contact:

Dr. Carl Good, President

Product Code:

Suppliers

Product Description:

Biosensors which use monoclonal antibodies and measure environmental pollutants, drugs, hormones, chemical biological warfare agents and other substances

International Equipment Company

300 Second Avenue

Needham Heights, MA 02194

Tel:

617-449-0800

Fax:

617-444-6743

Established:

1901

Employees:

280

Contact:

Mr. Norman Curtis, President

Product Code:

Laboratory

Product Description:

Bench top, large volume, high speed and ultra speed centrifuges. Also microtomes, microtome cryotats

Ionics, Inc.

65 Grove Street

Watertown, MA 02172

Tel:

617-926-2500

Fax:

617-926-4304

Established:

1948

Employees:

300

Contact:

Mr. Arthur Goldstein, President and CEO

Product Code:

Environment; Food; Chemicals;

Product Description:

Membrane systems for purification of biologically active fluids; membranes for use in diagnostic and therapeutic applications. Research: development of membranes for separation and purification systems including membranes for electrically driven and pressure driven processes

Keane Inc.

10 City Square

Boston, MA 02129

Tel:

617-241-9200

Established:

1987

Employees:

800

Contact:

Mr. John Keane, President

Product Code:

Laboratory

Product Description:

Manufacture packaged and customized software products to hospitals; also provides data processing facilities management services to hospitals

Koch Process Systems, Inc.

20 Walkup Drive

Westborough, MA 01581

Tel:

508-366-9111

Fax:

508-870-5930

Established:

1966

Employees: 210

Contact:

W. J. McAuley, President

Product Code:

Suppliers

Product Description:

Ultrafiltration membrane separation systems, biotech liquifiers and purification equipment

Laboratory Technologies Corp.

400 Research Drive

Wilmington, MA 01887

Tel:

508-657-5400

Established:

1980

Employees:

30

Contact:

Mr. Fredrick Putnam, President

Product Code:

Laboratory

Product Description:

Manufacture software packages for laboratory and test measurement for IBM PC's

Level 1 Technologies, Inc.

83 Enterprise Drive Marshfield, MA 02050

Tel:

617-834-0023

Fax:

617-837-8402

Established:

1986

Employees:

30

Contact:

Mr. Gary Tureski, President

Product Code: Medical/Surgical

Product Description:

Blood and fluid warmers

Lifeline Systems, Inc.

One Arsenal Marketplace Watertown, MA 02172

Tel:

617-923-4141

Fax:

617-923-1384

Established:

1974

Employees:

200

Contact:

Mr. L. Dennis Shapiro, President

Product Code:

Handicap Aids; Home Health Care

Product Description:

Personal emergency response systems for use in the home

Luxtec Corp.

Technology Park

Sturbridge, MA 01566

Tel:

508-347-9521

Fax:

508-347-5704

Established:

1982 41

Employees: Contact:

Mr. Bernard Clark, CEO

Product Code:

Medical/Surgical

Product Description:

Manufacture fiberoptic instruments, including headlights, retractors and video headlight camera systems

Macrochem Corporation

9 Linnell Circle

Billerica, MA 01821

Tel:

508-670-5800

Fax:

508-670-5824

Established:

1981

Employees:

17

Contact:

Mr. George Stevens, President

Product Code:

Therapeutics; Chemicals

Product Description:

Research: TNLY drug to reduce prostate cancer growth, TNCA drug to reduce bone calcium loss, ANTILON drug to control epilepsy, absorption enhancers for transdermal drug delivery, Heparin absorbtion filter, blood plasma volume expander

Mansfield Scientific

135 Forbes Boulevard Mansfield, MA 02048

Tel:

508-339-4112

Employees:

110

Contact:

Mr. John Pavlic, General Manager

Product Code:
Medical/Surgical

Product Description:

Electrodes, cables, leads, gels, tubings tubes and catheters

Matritech, Inc.

763 D Concord Avenue Cambridge, MA 02138

Tel:

617-661-6660

Established:

1987

Employees:

10

Contact:

Mr. Stephen Chubb, President

Product Code:

Diagnostics

Product Description:

Antibodies to select proteins of human cell nuclei for use in the detection of cancer

Medi-Tech Inc.

480 Pleasant Street Watertown, MA 02172

Tel:

617-923-1720

Employees:

100

Contact:

Mr. Joseph Ciffolillo, President

Product Code: Medical/Surgical

Product Description:

Syringes and needles, tubings, tubes and catheters

Medical and Scientific Designs Inc.

100 Longwater Circle Norwell, MA 02370

Tel:

617-871-4442

Established:

1980

Employees:

55

Contact:

Dr. Charles Rogers, President

Product Code:

Laboratory

Product Description:

Manufacture products for the diagnostic immunology laboratory, including automated assay processors and immunoassay reagents

Medisense, Inc.

128 Sidney Street

Cambridge, MA 02139

Tel: 617-492-2373 Fax: 617-576-6560

Established: 1982 Employees: 10

Contact: Mr. Ron Zwanziger, President

Product Code:

Diagnostics; Animal

Product Description:

Research and development of monoclonal antibodies, immunoassays, human diagnostics, polyclonal diagnostics, human diagnostic DNA, veterinary DNA diagnostics

Memtek Corporation

28 Cook Street

Billerica, MA 01821

Tel: 508-667-2828 Fax: 508-667-1731

Established: 1979 Employees: 90

Saul Sternberg, Vice President

Product Code:

Diagnostics; Therapeutics; Environment; Suppliers

Product Description:

Development and production of bioactive membranes for affinity separations, bioproducts harvesting, therapeutic plasma treatment and diagnostics

Mentor O and O, Inc.

3000 Longwater Drive Norwell, MA 02061

Tel: 617-871-6950 Fax: 617-871-7785

Established: 1981 Employees: 100

Contact: Mr. Richard Young, Chairman

Product Code: Ophthalmic

Product Description:

Diagnostic and surgical equipment for ophthalmology

MicroCal, Inc.

22 Industrial Drive, East Northampton, MA 01060

Tel: 413-586-7720 Fax: 413-586-0149

Established: 1979 Employees: 12

Contact: Dr. John Brandts, President

Product Code: Laboratory

Product Description:

MicroCal MC-2 Differential Scanning Calorimeter and the MicroCal OMEGA titration Calorimeter.

Microfluidics Corporation

44 Mechanic Street Newton, MA 02164

Tel:

617-965-7255

Established:

1983

Employees:

16

Contact:

Mr. David Halverson, President

Product Code:

Suppliers

Product Description:

High-performance mixing, dispersion and cell disruption equipment which produces lipsomes and emulsions

Micron Products Inc.

Sawyer Passway

Fitchburg, MA 01420

Tel:

508-345-5000

Established:

1972

Employees:

116

Contact:

Mr. Robert Sullivan, President

Product Code:

Diagnostic; Monitoring

Product Description:

Manufacture silver/silver chloride plated sensor elements for use as components of disposable electrodes, including EKG/ECC and related instruments

Micron Separations, Inc.

135 Flanders Road

P.O. Box 1046

Westborough, MA 01581

Tel:

508-366-8212

Established:

1982

Employees:

55

Contact:

Dr. John Greenwood, President

Product Code:

Suppliers

Product Description:

Manufacture hydrophobic and hydrophillic nylon filters, supported cellulose filters and microfilter membranes

Microvasive Inc.

31 Maple Street

Milford, MA 01757

Tel:

508-478-2956

Established:

1981

Employees:

100

Contact:

Mr. Robert DePasqua, President

Product Code:

Medical/Surgical

Product Description:

Endoscopic accessories

Milligen

75 Wiggins Avenue Bedford, MA 01737

Tel:

508-275-5208

Established:

1986

Employees:

130

Contact:

Mr. Christopher Simmons, President

Product Code:

Suppliers

Product Description:

Instruments and chemicals for the synthesis and sequence analysis of DNA and proteins

Millipore Corporation

Ashby Road

Bedford, MA 01730

Tel:

617-275-9200

Fax:

617-875-2050

Established:

1954

Employees:

1954

3100

Contact:

Mr. John Gilmartin, President and CEO

Product Code:

Suppliers

Product Description:

Life science tools including new generation biomolecular instruments and reagent systems for peptide and DNA synthesis and protein sequencing; HPLC instrument chemistries and methodologies for isolating and purifying biomolecules, membrane devices

MIRA

87 Rumford Avenue Waltham, MA 02154

Tel:

617-894-2200

Fax:

617-647-1855

Established:

1962

Employees:

65

Contact:

Mr. Luc Schepens, President

Product Code:

Opthalmic

Product Description:

Manufacture surgical instruments and materials for use in the opthlamic

field

Moleculon Biotech, Inc.

230 Albany Street

Cambridge, MA 02139

Tel:

617-577-9900

Established:

1984

Employees:

50

Contact:

Mr. Arthur Obermayer, President

Product Code:

Therapeutics

Product Description:

Transdermal and controlled release drug delivery systems

MP Video

65 South Street

Hopkinton, MA 01748

Tel:

508-435-2131

Fax:

508-435-2227

Established: Employees:

1974

Employee.

30

Contact:

Mr. Melvin Prehovitz, President

Product Code:

Medical/Surgical

Product Description:

Medical sterilizable video cameras for endoscopy, automatic fibre optic light sources, medical video accessories

New England Biolabs

2 Tozer Road

Beverly, MA 01915

Tel:

508-927-5054

Established:

1974

Employees:

00

Contact:

Mr. Donald Comb, President

Product Code:

Suppliers

Product Description:

Restriction endonucleases; enzymes involved in nucleic acid, metabolism, ligases, methylases, exonucleases, DNA substrates, M13 DNA sequencing systems, oligonucleotides, linkers, custom synthesis

Nourse Farms, Inc.

RFD PO Box 485

South Deerfield, MA 01373

Tel:

413-665-2658

Established:

1969

Employees:

25

Contact:

Mr. Timothy Nourse, President

Product Code:

Agriculture

Product Description:

Virus testing and tissue culture production

Nova Biomedical Corp.

200 Prospect Street Waltham, MA 02254

Tel:

617-894-0800

Fax:

617-899-0417

Established:

1976

Employees:

500

Contact:

Mr. Robert Coleman, President

Product Code:

Diagnostic

Product Description:

Electrolyte analyzers for routine hospital use or emergency applications.

Blood gas analyzers and hematology systems

Osteo-Technology

55 New York Avenue

Framingham, MA 01701

Tel:

508-875-0101

Fax:

508-875-7636

Established:

1985

Employees:

17

Contact:

Mr. Thomas Sherwin, President

Product Code:

Diagnostic

Product Description:

Desktop, PC based ultra-sound device for the evaluation of human bone strength

Olson Medical Sales, Inc.

28 Howe Street

P.O. Box 289

Ashland, MA 01721

Tel:

508-881-2250

Fax:

508-881-4858

Established:

1947

Employees:

25

Contact:

M.B. Engstrom, President

Product Code:

Medical/Surgical

Product Description:

Disposable custom kits for heart surgery, including tubing, connectors, filters, reservoirs and oxygenators

Omni-Flow Inc.

317 New Boston Street Wilmington, MA 01887

Tel:

508-935-5440

Fax:

508-938-0104

Established:

1983

Employees:

30

Contact:

Mr. James Coutre, President

Product Code: Medical/Surgical

Product Description:

Manufacture infusion pumps

Optical Diagnostic Systems Inc.

46 Manning Road Billerica, MA 01821

Tel:

508-667-8111

Fax:

508-671-0812

Established:

1983

Employees:

15

Contact:

Dr. Emile Kamieniecki, President

Product Code:

X-Ray

Product Description:

Manufacture X-ray imaging systems

Optical Micro Systems, Inc.

83 Pine Street

Peabody, MA 01960

Tel:

508-532-2112

Fax:

508-535-8013

Established:

1981

Employees:

35

Contact:

Mr. Jeffery Hightower, President

Product Code:
Ophthalmic

Product Description:

Ophthalmic surgical instrumentation

Organomation Associates, Inc.

266 River Road West Berlin, MA 01503

Tel:

508-393-2602

Fax:

508-838-2786

Established:

1959

Employees:

8

Contact:

Mr. Neal McNiven, General Manager

Product Code: Laboratory

Product Description:

Laboratory evaporators and extractors

Orion Research Inc.

529 Main Street Boston, MA 02129

Tel:

617-242-3900

Fax:

617-242-4195

Established: 1962

Employees:

434

Contact:

Mr. Alexander Jenkins, President

Product Code: Laboratory

Product Description:

Manufacture ion-selective electrodes

Polaroid Corporation

575 Technology Square Cambridge, MA 02139

Tel:

617-577-2000

Established:

1938

Employees: Contact:

10000

Dr. Thomas O'Brien, VP International Marketing

Product Code:

Diagnostic

Product Description:

Medical and dental imaging products

Precision Systems Inc.

16 Tech Circle High Tech Park Natick, MA 01760

Tel: 508-665-7010

Established: 1962 Employees: 35

Contact: Mr. Charles Bell, President

Product Code: Laboratory

Product Description:

Manufacture osmometers and calcium titraters

Pulpdent Corporation

80 Oakland Street

P.O. Box 780

Watertown, MA 02272

Tel: 617-926-6666 Fax: 617-926-6262

Established: 1947 Employees: 35

Contact: Mr. Harold Berk, President

Product Code:

Dental

Product Description:

Dental consumables

Questek Inc

44 Manning Road Billerica, MA 01821

Tel:

508-667-9919

Fax:

508-667-6790

Established:

1982

Employees:

47

Contact:

Mr. Gary Klauminzer, President

Product Code:

Medical/Surgical

Product Description:

Manufacture excimer lasers

Radiation Monitoring Devices, Inc.

44 Hunt Street

Watertown, MA 01581

Tel:

617-926-1167

Fax:

617-926-9743

Established:

1974

Employees:

40

Contact:

Mr. Gerald Entine, President

Product Code:

Diagnostic; Monitoring; Medical/Surgical

Product Description:

Custom instrumentation for the detection of radiation, measurement of brain, kidney, liver and heart function, detection of tumor sites tagged via monoclonal antibodies, biotech analytical instrumentation

Radionics Inc.

76 Cambridge Street Burlington, MA 01803

Tel:

617-272-1233

Established:

1948

Employees:

30

Contact:

Mr. Bernard Cosman, President

Product Code: Medical/Surgical

Product Description:

Manufacture products used in neurology including: intracranial pressure monitors and measuring units, cerebrospinal and hydrocephalic catheters and shunts, forceps, electrodes, and untrasonic transducers

Rainin Instrument Co., Inc.

Mack Road

Woburn, MA 01801

Tel:

617-935-3050

Established:

1963

Employees:

05

Contact:

Mr. Kenneth Rainin, President

Product Code:

Laboratory

Product Description:

Manufacture chemicals, equipment and accessories for liquid chromatography

Ranfac Corp.

Avon Industrial Park Avon. MA 02322

Tel:

508-588-4400

Fax:

508-584-8588

Employees:

50

Contact:

Mr. Robert Adler, President

Product Code: Medical Surgical

Product Description:

Manufacture hypodermic instruments

Repligen Corporation

One Kendall Square

Building 700

Cambridge, MA 02139

Tel:

617-225-6000

Fax:

617-494-1786

Established:

1981

Employees:

75

Contact:

Mr. Sanford Smith, President

Product Code:

Diagnostics; Therapeutics; Suppliers

Product Description:

Extracorporeal plasma filtration device for treatment of cancer and autoimmune diseases, based on rProtein A(tm), rDNA 120 antigenic fragments for AIRS diagnosis, AIDS vaccine, lignin-degrading and modifying enzymes for pulp processing and Bacillus thuringiensis for insect control; food biotechnology; Primary research effort on AIDS vaccine and therapeutic development

Research Biochemicals Inc.

9 Erie Drive

Wayland, MA 01778

Tel: 508-358-7162

Established: 1980 Employees: 10

Contact: Ms. Evelyn Friedman, President

Product Code: Laboratory

Product Description:

Manufacture biochemicals related to neurochemistry

RNA Medical

2 Craig Road Acton, MA 01720

Tel: 508-263-6162 Fax: 508-263-2860

Established: 1976 Employees: 10

Contact: Mr. Bruce Williams, President

Product Code: Laboratory

Product Description:

In vitro diagnostic solutions and reagents; Ph/blood gas controls, blood gas instrument reagents, calibrating gases and buffers, co-oximeter controls and reagents, ISE controls and reagents

Rohm Tech, Inc.

195 Canal Street Malden, MA 02148

Tel:

617-321-6984

Fax:

617-322-0358

Established: Employees: 1986

80

Contact:

Mr. Ekkehard Grampp, President

Product Code:

Agriculture; Food; Chemicals

Product Description:

Enzymes for food processing with technical service break-up

Romicon, Inc.

100 Cummings Park Woburn, MA 01801

Tel·

617-935-7840

Fax:

617-935-7183

Established:

1972

Employees:

115

Contact:

Mr. Robert Cross, President

Product Code:

Suppliers

Product Description:

Ultrafiltration membranes, microfiltration membranes, chromatography media and columns, complete systems for separation and purification. Research: production development of membranes for separation and purification of bioproteins, cells, cell debris, enzyme and biological production

Safer, Inc.

189 Wells Avenue Newton, MA 02159

Tel: 617-964-2990 Fax: 617-235-6237

Established: 1978 Employees: 50

Contact: Mr. Milton Wilkins, President

Product Code: Agriculture

Product Description:

Research and development of biologically based pesticides and plant care products based upon fatty acid, plant oil and microbial (both naturally occurring and genetically engineered)

Sanaline

19 Union Street Scituate, MA 02066

Tel: 617-545-3060

Established: 1975 Employees: 15

Contact: Mr. Richard Powderly, President

Product Code:

Environment; Food; Chemicals; Suppliers

Product Description:

Comprehensive line of microbiological testing products used in testing water, soft drinks, beer, wines, and other liquids where enumeration and identification of microorganisms is of importance

Schott Fiber Optics, Inc.

122 Charlton Street

Southbridge, MA 01550

Tel:

508-765-9744

Fax:

508-764-6273

Established: 1954

350

Employees: Contact:

Mr. Brian Edney, President

Product Code:

Diagnostic; Medical/Surgical

Product Description:

Fiber optic endoscopes for diagnostic and therapeutic applications

SDK Healthcare Information Systems

1550 Soldiers Field Road

Boston, MA 02135

Tel:

617-783-7351

Fax:

617-783-7351

Employees: 100
Contact:

Mr. Michael Kaufman, President

Product Code:

Suppliers

Product Description:

Manufacture patient care systems and general administrative systems for medical practices and hospitals

Sepracor, Inc.

33 Locke Drive

Marlborough, MA 01752

Tel:

508-481-6700

Fax:

508-481-7683

Established:

1985

Employees:

68

Contact:

Mr. James Mzarek, President

Product Code:

Suppliers

Product Description:

Manufacture membranes for use in the areas of fermentation, extracorporeal blood processing and the manufacture of artificial organs

Seragen, Inc.

97 South Street

Hopkinton, MA 01742

Tel:

508-460-0412

Established:

1979

Employees:

70

Contact:

Mr. Karl Ahrendt, President

Product Code:

Diagnostics; Therapeutics

Product Description:

RIA kits and supporting reagents for prostaglandins, throm-boxane, leukotrienes and HETEs. Research on hybrid protein molecules that home-in on specific type of cancer cells and on the immune cells responsible for rejecting organ transplants

Serono Diagnostics, Inc.

100 Longwater Circle Norwell, MA 02061

Tel:

617-871-3962

Fax:

617-871-6766

Established:

1969

Employees:

100

Contact:

Mr. Hersh Petrocelly, President

Product Code: Diagnostics

Product Description:

U.S. marketing and distribution of diagnostic products manufactured by Ares Serono Group Companies throughout the world

Shiley Infusaid Inc.

1400 Providence Highway Norwood, MA 02062

Tel:

617-769-8330

Fax:

617-769-0072

Established:

1981

Employees:

150

Contact:

Mr. Richard Meelia, President

Product Code:

Medical/Surgical; Implant/Prostheses

Product Description:

Manufacture implantable medical pumps

Sil-Med Corp.

700 Warner Blvd. Taunton, MA 02780

Tel: 508-823-7701

Established: 1974 Employees: 95

Contact: Mr. Arnold Dessel, President

Product Code: Medical/Surgical

Product Description:

Manufacture silicone catheters

Somatix, Inc.

One Kendall Square Cambridge, MA 02139

Tel: 617-225-6000 Fax: 617-494-1786

Established: 1988 Employees: 6

Contact: Mr. Gordon Kingsley, President

Product Code: Therapeutics

Product Description:

Somatic cell therapy using retroviral vectors for gene transfer into somatic cells

StatSpin Technologies

588 Pleasant Street Norwood, MA 02062

Tel:

617-551-0100

Fax:

617-551-0036

Established: 1982

Employees:

23

Contact:

Dr. Thomas Kelley, President

Product Code:

Laboratory

Product Description:

Products of collecting, preparing and processing of small samples of blood

Sudbury Systems Inc.

49 Boston Post Road Sudbury, MA 01776

Tel:

508-443-1100

Fax:

508-443-1129

Established:

1972

Employees:

20

Contact:

Mr. Howard Cohen, President

Product Description:

Manufacture random access voice storage and retrieval systems for radiological and clinical reports

Summit Medical Technology Inc.

150 Coolidge Avenue Watertown, MA 02172

Tel:

617-923-9633

Fax:

617-923-4119

Employees:

21

Contact:

Mr. David Muller, President

Product Code: Medical/Surgical

Product Description:

Manufacture excimer lasers

System Analysis Corp.

1 Hollis Street

Wellesley, MA 02181

Tel:

617-237-9500

Established:

1976

Employees:

30

Contact:

Mr. Robert Sage, President

Product Code:

Laboratory

Product Description:

Design and develop turnkey clinical laboratory data processing systems for hospitals

T Cell Sciences, Inc.

840 Memorial Drive

Cambridge, MA 02139

Tel: 617-864-2160 Fax: 617-864-0854

Established: 1984 Employees: 66

Contact: Mr. James Grant, CEO

Product Code:

Diagnostics; Therapeutics

Product Description:

Developing diagnostic and therapeutic products for the detection, monitoring and treatment of immune system disorders, including: autoimmune diseases and infectious diseases and certain cancers

Thermedics

470 Wildwood St. P.O. Box 12999 Woburn, MA 01801

Tel: 617-933-3786

Fax: 617-933-4476

Established: 1983 Employees: 129

Contact: Mr. John Wood, President

Product Code:

Laboratory; Implants/Prostheses

Product Description:

Manufacture biomedical products and biomaterials

Thermo Cardiosystems

470 Wildwood Street

P.O. Box 2697

Woburn, MA 01888

Tel:

617-932-8668

Fax:

617-933-4476

Established:

1988

Employees:

40

Contact:

Mr. John Wood, President

Product Code:

Implant/Prostheses; Medical/Surgical; Therapeutic

Product Description:

Pneumatic and electric ventricular assist devices

Transgenic Sciences, Inc.

365 Plantation Street Worcester, MA 01605

Tel:

508-752-4442

Established:

Employees:

1987

Contact:

Mr. James Sherblom, President

Product Code:

Therapeutics; Agriculture

Product Description:

Research and development of products in the area of transgenic animal and human gene therapy

Tropix

47 Wiggins Avenue Bedford, MA 01730

Tel:

617-271-0045

Fax:

617-275-8581

Established:

1986

Employees:

10

Contact:

Ms. Patricia McGrath, President

Product Code:

Suppliers

Product Description:

Development of luminescent molecules and enhancers for detecting substances in chemical and biological samples. Marketing of analytical test kits, photosensitive film, photon detecting instruments for bioanalysis

Waters Chromatography Division

Millipore Corp. 34 Maple Street

Milford, MA 01757

Tel:

508-478-2000

Fax:

508-872-1990

Established:

1962

Employees:

1075

Contact:

Mr. Chane Graziano, President

Product Code:

Chemicals; Suppliers

Product Description:

Development of instruments, chemicals, and methodologies for protein purification, amino acid analysis DNA isolation and analysis, neurotransmitter analysis, characterization of carbohydrates, HPLC instruments

ZMI Corporation

500 West Cummings Park

Woburn, MA 01801

Tel:

617-933-9150

Fax:

617-933-1807

Established: 1981

Contact:

Mr. Rolf Stutz, President

Product Code:

Diagnostic; Monitoring; Therapeutic

Product Description:

External pacemaker pulse generator with ECG monitor (non-invasive); external pacemaker/defibrillator combination with ECG monitor (noninvasive); ECG electrodes disposal

Zymark Corporation

Zymark Center

Hopkinton, MA 01748

Tel:

508-435-9501

Fax:

508-626-8652

Established: 1981 Employees: 150

Contact:

Mr. Francis Zenie, President

Product Code:

Environmental; Suppliers

Product Description:

Laboratory robotic systems and accessories for chemistry and biotechnology; systems support and training







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Phone:	Fax:
Company Contact & Title:	
Year Established:	
# of Employees:	#of Employees in Sales
Biomed Products as a Percent of Total	al Sales:
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Research:	
Products/Services:	
Briefly describe your current customer base (for example, size of customer companies and areas they are working in):	
Please list the products you are currently distributing or producing:	
Which category does your customer base belong to: Under \$1 million sales \$1 million - \$5 million sales \$5 million - \$50 million sales \$50 million - \$250 million sales Over \$250 million sales Unable to generalize Other	
Please list the U.S. companies your company is doing business with and the nature of the relationship. Please include contact address and contact name if possible:	
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